ANNUAL REPORT

of the

DAIRY PROCESSING

and

DAIRY PRODUCTION BRANCHES

for the year

1990-1991

Alberta
AGRICULTURE

92-01030/

ANNUAL REPORT

OF THE

DAIRY PROCESSING BRANCH

AND

DAIRY PRODUCTION BRANCH

FOR THE FISCAL YEAR

1990 - 1991

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DAIRY PRODUCTION BRANCH

The Dairy Production Branch undertook several initiatives relating to its role in dairy production regulatory and advisory services.

Dairy extension programs and delivery were the subject of a producer survey undertaken in cooperation with regional dairy specialists. The information obtained is of assistance in identifying dairy extension needs and priorities.

Dairy management extension and advisory services were coordinated with Alberta Dairy Herd Improvement Services (ADHIS). Automated data transfer capability was identified as an opportunity to more effectively utilize milk recording information. A demonstration project was undertaken whereby milk recording data was transferred to a commercial dairy management software package in an on-farm computer. This feature greatly enhanced the application and utilization of milk recording data in dairy herd management.

A significant shift away from butterfat at the consumer level has resulted in renewed interest in multiple component pricing of milk. At both the national and provincial levels, several multiple component pricing options were considered. The task of changing to multiple component pricing is complicated by the range of dairy products and their composition as well as the regulated milk price levels which are based on utilization.

A transitional phase will be needed as milk component values are adjusted in response to market trends.

The Nocardia Task Force continued to monitor bulk milk samples from Alberta dairy herds on a monthly basis. By year end very few newly infected herds were identified. Most producers had effectively responded to being advised of the presence of Nocardia in their herds. Individual cows were sampled and those testing positive were culled. Of major significance in evaluating the results of this project is the increased awareness and interest in mastitis prevention and control among all Alberta producers and their veterinarians.

Dairy Farm Inspection

There were 1,418 milk producers in the province as of December 31, 1990, down from 1,444 a year earlier. This was consistent with the trend in slowly declining producer numbers in recent years.

Dairy farm inspection staff performed 2,753 farm inspections in 1990-91, and an additional 1,615 farm consultations. Ninety-eight licensed bulk milk haulers were monitored for proper milk handling procedures. A total of 104 farm bulk tanks were calibrated to ensure correct producer payment.

A total of 35,207 milk samples were analysed for compliance with current milk quality standards. During the twelve month period ending

March 31, 1991, the Milk Grade and Price Program recorded 86 Standard Plate Count infractions, 26 Freezing Point infractions, 58 Inhibitor infractions, and 134 Somatic Cell Count infractions - a total of 304 infractions. Based on the Standard Plate Count, 90.7% of all producer milk samples tested less than 20,000 bacteria/mL. Only 3.5% of the samples tested above the non-compliance level of 75,000 bacteria/mL. (See Chart I.)

The Milk Grade and Price Program and advisory services provided to producers contributed significantly to the excellent quality of milk produced in Alberta in 1990-91.

Funds collected from producers resulting from milk grade deductions were allocated to pay innocent producers for lost milk, to compensate milk transport operators when confirmation was required for suspicious inhibitor positive loads, and for the disposal of loads which tested positive. Funds remaining were distributed to milk producers on a monthly basis by the Alberta Dairy Control Board.

Bulk milk somatic cell counts continued to be monitored and advisory assistance was provided to reduce the incidence of mastitis in dairy herds. Bulk milk tank somatic cell counts averaged 263,611 cells per millilitre - a further improvement over 1989-90. Less than 4% of the producer samples tested in Alberta exceeded the provincial standard of 750,000 cells/ml.

The Award of Excellence, sponsored by Alberta Agriculture, was introduced in 1986 to recognize dairy producers for excellence in quality milk production and maintenance of dairy premises. The Award of Excellence was presented to 250 milk producers at the Annual Alberta Dairymen's Association Convention in February, 1991, as compared to 76 in 1986, the first year of the program (see Chart II). This year, regional winners and an overall provincial winner were recognized, based on the lowest average bulk tank somatic cell count. The response by the milk producers of Alberta has been outstanding.

Milking Management

The Milk Sampling and Metering Committee of the National Liaison Group on Milk Product Quality proposed the evaluation of truck mounted milk collection systems. These systems include state of the art computer controlled automatic milk sampling equipment, milk meters and data acquisition and transfer technologies. The Dairy Production Branch developed a budget and an experimental procedure for the purpose of conducting these evaluations in Alberta. Initial stages will include laboratory evaluations of these systems for sampling and metering accuracy.

These evaluations are to be conducted at the Leduc Food Processing Research Center, October through December, 1991. Field tests on selected systems are scheduled for January through March, 1992. All evaluations are subject to funding grants and approvals.

During the Dairy Extension Series in January, 1991, dairy producers were encouraged to evaluate the function of their milking systems on a routine basis as part of a regularly scheduled testing and analysis program. Producers were encouraged to request this service through their milking equipment dealerships. As a result, several dealerships have invested in expensive pulsation recorders. One dealer is very pleased with the results he has achieved in terms of additional sales and customer motivation through the use of his recorder. Others have enquired how Dairy Production Branch staff complete an evaluation. Copies of our evaluation form have been requested and one dealer accompanied staff on farm evaluations, in order to learn about our test procedures.

Three milking equipment dealerships have closed their doors; one new dealership has opened.

Analysis of Alberta Dairy Herd Improvement Services (ADHIS) records from 50 Alberta dairy herds to determine the nature of the relationship between milk production and individual cow somatic cell counts, failed to confirm a significant inverse relationship of the type that linear scores are based upon. Further indepth analysis of Alberta records is indicated. Linear scores are enjoying increasing popularity and application; however, there is a need for further indepth analysis to confirm or deny that such a relationship exists and is valid in Alberta.

A total of 116 equipment analyses were completed by the two milking management specialists. Forty-eight new or updated milking systems were

evaluated. Another 9 calls were completed for transient voltage concerns. Concerns or faults were expressed and identified, and recommendations were provided to producers regarding their milking systems.

Milk Recording

The Dairy Production Branch in cooperation with ADHIS and regional staff, has been very active in enhancing milk recording services in Alberta. New services included persistency values, the AP testing option and data transfer.

Provincial extension initiatives focussed on Dairy Herd Improvement (DHI) and getting the most from the DHI program. The Alberta Dairy Extension Series highlighted lactation curves, persistency and analysis services.

Staff and industry training was provided on the use of data transfer and its application with analysis software packages.

The Dairy Production Branch continues to provide ADHIS with an annual grant to support DHI services.

A total of 910 herds were receiving DHI service as of January 1, 1991. This translates to 64.2% of all dairy herds in Alberta enrolled on DHI. The total includes 284 herds (20,361 cows) on supervised service, 358 herds (22,074 cows) on owner-sampler, and 268 herds (17,999 cows) on AP

testing. Monthly somatic cell counting continued to be a valuable service with 815 herds (90%) enrolled.

DHI service fees were:

Supervised -	$10.75/cow/6 months
AP -	$ 8.00/cow/6 months
Owner-Sampler -	$ 3.15/cow/6 months
Somatic Cell Counting -	$ 1.25/cow/6 months
Data Transfer -	$42.00/6 months.

The average production per cow (on milk recording) increased to 7,344 kg (milk), 259 kg (fat) and 237 kg (protein). This translates to BCA's of 159 (milk), 150 (fat) and 162 (protein).

Extension Services

Host sites for the 1991 Dairy Extension Series were Lethbridge, Olds, Lacombe, Leduc and Rycroft. This series featured Dr. Bob Appleman, Extension Animal Scientist, Dairy Management, University of Minnesota, who spoke on "Milking Management, An Update on Milking Systems and Equipment". This presentation was well received by Alberta dairy producers.

The Alberta Dairy Extension Series also featured the use of lactation curves, persistency and DHI data transfer. The series attracted over 400 producers to a series of five meetings across the province.

The Annual Western Canadian Dairy Seminar was moved to Red Deer. This move was well received by the industry, with an increase in registrations to over 200.

Producers and agribusiness continue to show strong support for the annual Alberta Dairy Congress in Leduc. The combination of trade show, educational programs and cattle show, continues to attract in excess of 1,200 people.

The Alberta Dairy Producer newsletter continued to be very popular. Through a combination of technical articles, research updates, coming events and a classified section, the newsletter has become a "must read" for those wanting to keep up-to-date with the Alberta dairy industry. The publishing date was adjusted to better meet the needs of dairy producers.

CHART I

MILK GRADE AND PRICE PROGRAM

NUMBER OF VIOLATIONS PER YEAR

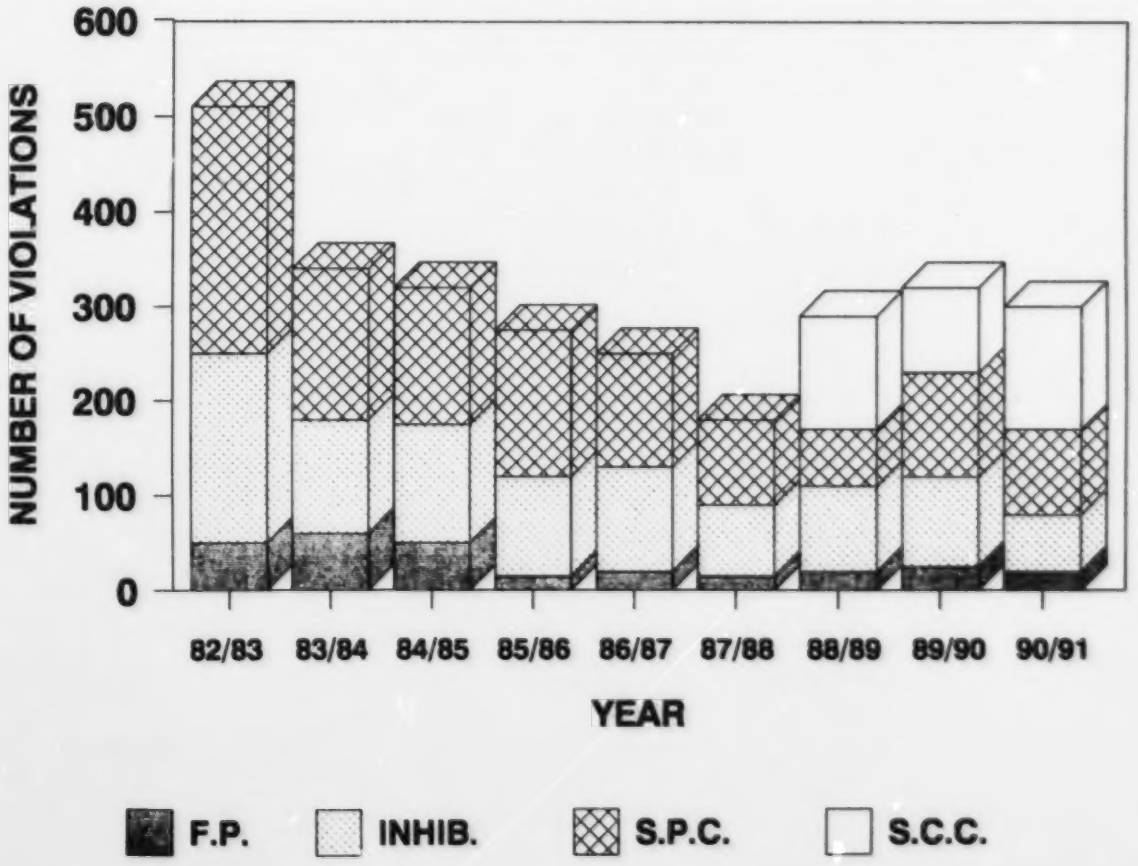

CHART II

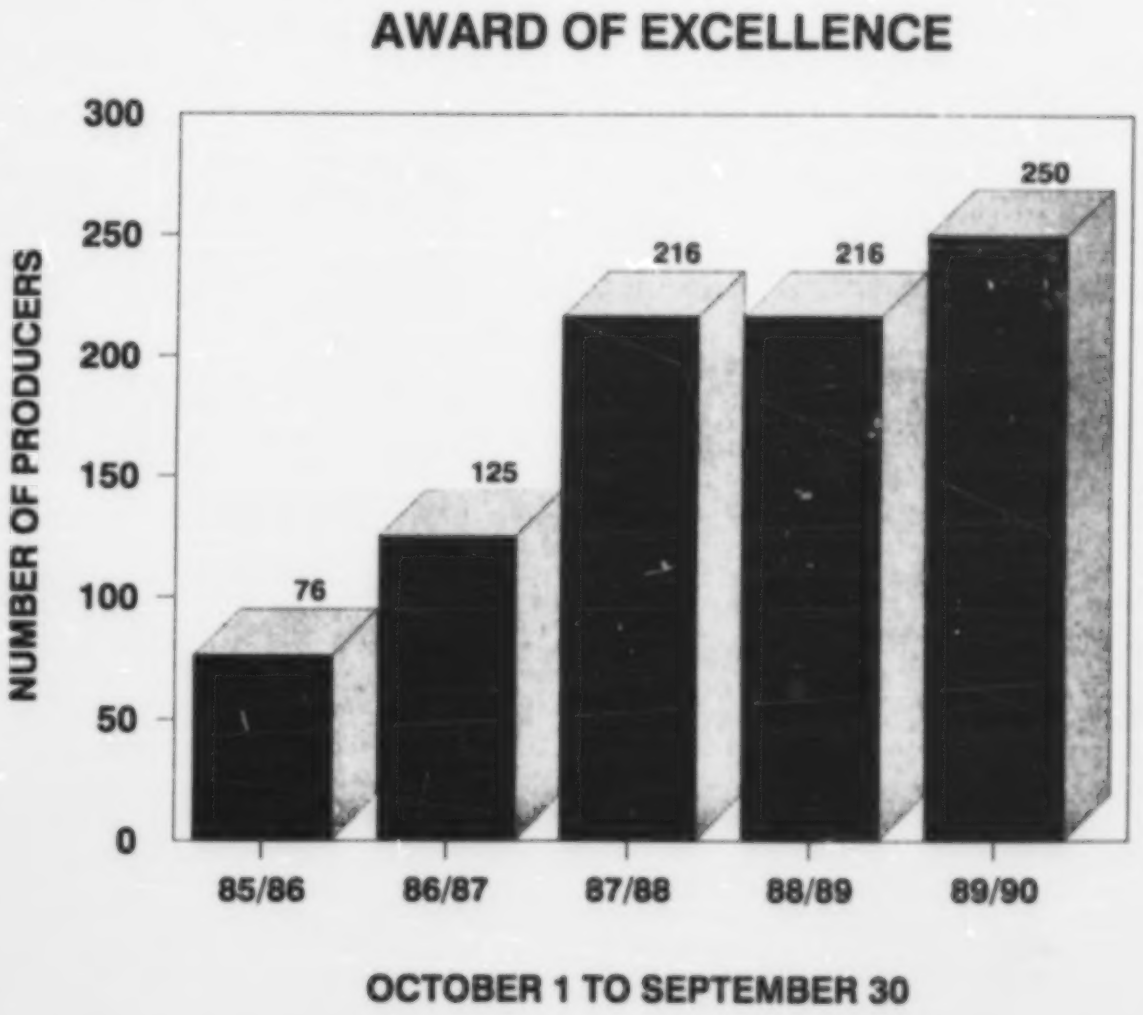
AWARD OF EXCELLENCE
NUMBER OF PRODUCERS
300
250
200
150
100
50
0
76
125
216
216
250
85/86
86/87
87/88
88/89
89/90
OCTOBER 1 TO SEPTEMBER 30

TABLE I The following table summarizes the activities of Dairy Farm Inspection. Comparisons are based upon an April 1 to March 31 year.

	1989-90	1990-91
Number of Certified Milk Producers	1,444	1,418
Inspections of Dairy Farm Premises	3,055	2,753
Non-Inspection Dairy Farm Calls	1,746	1,615
TOTAL FARM CALLS	4,801	4,368
TOTAL RAW MILK SAMPLES ANALYZED	36,006	35,207
Quality of Milk Samples Analyzed:		
Milk Samples Non-Compliance (75,000/mL S.P.C.)	3.6%	3.5%
Average Somatic Cell Counts (Leucocytes)	279,862	263,611
Number of Infractions:		
- SPC	84	86
- Inhibitors	87	58
- Cryoscopic Analysis	33	26
- Somatic Cells	129	134
TOTAL INFRACTIONS	333	304

Number of Infractions per Producer:

	1986-87	1987-88	1988-89	1989-90	1990-91
1 Infraction	153	133	184	167	152
2 Infractions	63	38	60	69	68
3 Infractions	19	10	27	47	46
4 Infractions	7	2	11	24	18
More than 4	6	2	6	26	20
	248	185	288	333	304

TABLE II ESTIMATED FARM VALUE OF ALBERTA MILK PRODUCTION, APRIL 1990 - MARCH 1991

The quantity, price, value and utilization of milk production during April 1990 to March 1991 are reported in the following table. To indicate changes from the previous year, 1989-90 figures have been included.

	Year	Milk Equivalent '000 kg	% of Total	Prices $	Value $'000
Milkfat for Creamery Butter	1990-91	10,149 L	1.64	4.850/kg	2,165
	1989-90	10,365 L	1.56	4.64/kg	2,116
Milk Purchased for the Manufacture of Powder and Butter[1]	1990-91	144,898 L	23.40	42.09/hL	60,987
	1989-90	142,728 L	21.48	41.05/hL	58,590
Milk for Cheesemaking	1990-91	126,737 L	20.46	42.47/hL	53,825
	1989-90	144,156 L	21.69	41.09/hL	59,247
Milk for Concentrating and Milk & Milkfat for Ice Cream & Misc. Products[2]	1990-91	60,772 L	9.81	44.24/hL	26,885
	1989-90	64,641 L	9.73	42.92/hL	27,744
Milk Purchased for Fluid Purposes	1990-91	267,616 L	43.21	54.01/hL	144,539
	1989-90	271,487 L	43.34	52.82/hL	143,399
Skimmilk Kept on Farms	1990-91	9,134 L	1.48	10.00/hL	0,913
	1989-90	14,649 L	2.20	20.64/hL	3,024
Estimated Federal Subsidy	1990-91				17,906
	1989-90				18,445
TOTAL	1990-91	619,306			307,220
	1989-90	648,026			312,565

[1] Includes milk used for the making of cottage cheese.
[2] Does not include milkfat from creamery butter used in the manufacture of ice cream.

TABLE III

MILK COW NUMBERS

Year	No. Cows June 1st	Year	No. Cows June 1st
1950	297,800	1979	135,000
1955*	285,000	1980	138,000
1960	279,000	1981	142,000**
1965	262,000	1982	158,000**
1970	198,000	1983	157,000**
1973	169,000	1984	157,000**
1974	169,000	1985	150,000**
1975	170,000	1986	152,000**
1976	152,000	1987	130,000**
1977	155,000	1988	128,000**
1978	148,000	1989	126,000**
		1990	123,000**

* From 1955 forward, average butterfat test 3.5%; previous years were 3.6%.

** Census figure as of January 1 of that year.

TABLE IV

SEMI-ANNUAL REGIONAL DHI PRODUCTION SUMMARY

(BASED ON DAIRY HERD IMPROVEMENT PRODUCTION RECORDS AS OF JANUARY 1, 1991)

REGION	# OF HERDS	# OF COMPLETED RECORDS	305 DAY PRODUCTION (kg)			305 DAY BCA*			CALVING INTERVAL (months)	AVG. AGE OF FIRST LACT.COWS	AVG. # OF LACTATION PER COW
			MILK	FAT	PROTEIN	MILK	FAT	PROTEIN			
1. Lethbridge-Brooks	145	11800	7555	263	243	163	154	166	12.9	26.8	2.5
2. Calgary	112	6156	7517	266	243	165	155	169	13.4	28.1	2.6
3. Red Deer	282	15549	7372	261	239	159	152	163	13.2	28.2	2.5
4. Vermilion	66	3563	6964	249	225	151	145	154	13.1	27.6	2.6
5. Edmonton	258	14242	7156	252	230	153	145	156	13.3	28.9	2.6
6. Peace River	15	1582	7377	259	237	158	149	160	13.3	28.5	2.6
PROVINCE	878	52892	7344	259	237	159	150	162	13.2	28.0	2.6

*BCA: Breed Class Average

DAIRY PROCESSING BRANCH

Overview

Total milk supply was up slightly from the previous year. Fluid milk sales, on a per capita basis, continued to improve but were still below the level of previous years. During the flush season, the milk drying plants and cheese manufacturing plants were operating at near maximum capacity.

The introduction of cascading prices for the three sub-classes in Class 3 milk has been well received by the cheese manufacturing plants, particularly the independent variety cheese plants.

The removal of the controlled areas has resulted in an expansion of the sales areas for some of the larger companies. Some brands of dairy products are now available throughout the province whereas they were previously restricted to certain areas. Some concerns have been expressed about the amount of shelf space available for each brand as there has been little, if any, additional space.

Dairy Manufacturing Plants

The renovation and modernization of plants continued in varying degrees of complexity. A level of interest continued for the establishment of dairy manufacturing plants, particularly for the manufacturing of cheese

and the use of goat's milk. Several enquiries were received and four applications were submitted.

A small Feta cheese plant commenced operation in the northeast part of the province. This plant uses only goat milk and at this stage only from their own herd.

Three plants closed during the year - a privately owned fluid milk and ice cream plant at Tofield was sold, a fluid milk plant and a cheese manufacturing plant in Wetaskiwin were shut down by their companies.

The cheese plant closure was part of a reorganization, to be completed in 1991, by one of the major companies. Other undertakings included the relocation of the cheese cutting operation and the considerable expansion and modernization of cheese making facilities, and the installation of whey drying equipment.

A variety cheese manufacturer in Calgary commenced and completed a major renovation and expansion of the manufacturing room. Environmental planning and the installation of modern equipment makes this one of the most up-to-date Mozzarella plants in Western Canada.

A major dairy company, with three plants in Alberta, was sold during the year. An Ontario firm purchased two of the plants and an Alberta co-operative purchased the third. This is the first time in many years

that a dairy firm from out of the province has been directly involved with milk processing.

The annual inspection and testing of pasteurization units continued. Since all units are now approved, few problems were encountered. Plants continue to upgrade the pasteurizers as more refined and computerized components and funds become available. Several provinces now have a pasteurizer inspection program in anticipation of a national requirement for pasteurization unit certification.

One pasteurizer operator course was conducted during the year. In addition to those from Alberta plants, federal inspectors and industry personnel from New Brunswick also took the course.

Plant inspection programs were continued to ensure compliance of all Alberta dairy manufacturing facilities and their products with existing regulations.

The Branch continued to participate in the federal in-depth plant inspection program. Alberta plants continue to have the highest scores in the country. As the plants get older, the scores are dropping with the gap between our average score and that of other provinces becoming narrower.

The Dairy Processing Branch continued to participate and represent the four western provinces on a committee to review and update the plant inspection program. This is the first major review since the program was

introduced in 1971. The committee members represent provincial and federal governments and the dairy industry. Major program revisions are almost completed and, following a thorough review process and training workshops, should be ready for implementation in April 1992.

Current positions and comparative data for last year are as follows:

	1989-90	1990-91
Alberta Average Plant Score	81.7	81.3
National Average Plant Score	79.6	78.4
Lowest Scoring Plant In Alberta	77.6	74.1
Highest Scoring Plant in Alberta	95.0	95.0

Dairy Products

Bacteriological and compositional standards of fluid and manufactured dairy products remained very high and substantially higher than the regulatory minimum. The Branch continued to concentrate on milk product keeping quality as reflected by a stressed product test as the yardstick by which quality was measured. This more stringent test is necessary since products must remain fully acceptable to consumers after sometimes lengthy periods in the distribution system, not always under ideal storage conditions. Dairy processing specialists investigated isolated lapses in quality rather than chronic difficulties in producing satisfactory products.

Virtually all freshly processed milk met health standards. After subjection to severe conditions (7 days at 7°C), 82.9% were still within requirements of the regulations, a significant increase over the previous year. The Branch continues to work towards 100% compliance at both levels.

Licensing

Licences Issued	1989-90	1990-91
Dairy Manufacturing Plants	45	44
Bulk Tank Milk Graders	239	258
Milk and Cream Graders & Testers	56	56
Cream Graders	30	32
Plant Milk Graders	116	116
Pasteurizer Operators	161	174

Regulatory

Dairy processing specialist activities in regulatory functions were:

	1989-90	1990-91
Dairy Plant Inspections	472	430
Cream Grades Checked	673	533
Cream Grades Adjusted	0	0
Cream Tests Checked	547	400
Cream Tests Adjusted	0	0
Bulk Tank Trucks & Drivers Inspected	189	207

Margarine

The Branch's responsibilities under the Margarine Act were carried out at a similar level of activity as in previous years. Margarine produced and/or sold in the province was sampled and analyzed throughout the year and found to comply fully with compositional requirements.

Regulatory Enforcement

The court case on the possession of imitation cheese was concluded during the year with a not guilty verdict. The Crown, in the judge's opinion, had not established possession with criminal intent. The product remained under detention pending a decision by the defendant for its disposal.

There are continued attempts to market other imitation dairy products in contravention of the Dairy Industry Act. As well as infringing on the Dairy Industry Act, methods and information used by promoters frequently contravened other regulations, e.g. those of the Health Protection Branch and Consumer and Corporate Affairs Canada.

Extension

Dairy processing specialists worked closely with dairy processors in the implementation of technological changes and in broadening the range of dairy processing in the province. An extension activity in recent years

has been a voluntary certification program for dairy plant employees to assist in attaining improved quality through increased education and awareness. Lower turnover of staff in most dairy plants accounts for the reduction in issue of Dairy Plant Worker Certificates. The awarding of certificates in specialist categories such as Cheesemaker and Plant Sanitarian has remained steady.

The licensing of Milk and Cream Graders and Testers and Bulk Milk Graders is a legislative responsibility of this Branch. In view of the important role of the bulk milk grader in the collection of samples on which the producer is paid, the Branch has continued emphasis on testing and inspection of bulk milk graders.

Follow-up investigations were carried out when significant variations were found on the producer samples taken by the bulk milk graders. In most cases, the increased surveillance resulted in more attention being paid to proper pick-up procedures. Additional follow-up work was conducted when problems continued to exist. A significant improvement was noted in the number of contention samples.

The revision of the Cheesemaker's Manual continued during the year and is scheduled for completion this year.

Together with Agriculture Canada and the Alberta Dairymen's Association, the Processing Branch continues to be active in sponsoring and judging dairy product quality competitions. Competitions are based on

bi-monthly samples. Winners are recognized annually at the Dairymen's Convention.

Special Projects

The principal activity of Special Projects related to the investigation of the illegal sale of imitation dairy products, notably imitation cheese, and the enforcement of the Dairy Industry Act with respect to imitation dairy products.

Other activities included: the co-ordination of Alberta Career Development, the Alberta Dairymen's Association, and dairy industry relations with respect to the training and licensing of pasteurizer operators; participation in the pasteurizer operators' courses; ongoing consultation with industry on regulatory and legislative matters; and investigation and assistance in the resolution of problems associated with the dairy industry.

On behalf of the Department, Special Projects continued to work with the private and public sectors on matters relating to aquaculture, and assisted industry in the organization of an association to represent their interests.

TABLE I **ESTIMATED PRODUCTION AND VALUE OF FACTORY DAIRY PRODUCTS**

The following table shows the quantity, price and value of dairy products manufactured or processed in Alberta dairy manufacturing plants during April 1990 to March 1991, with corresponding figures for 1989-90 added to provide a means for comparison.

	Year*	Quantity ' 000	Price $	Value $ '000
Creamery Butter (kgs)	1990-91	7,392 kg	5.870/kg	43,391
	1989-90	7,147 kg	5.687/kg	40,645
Cheddar Cheese (kgs)	1990-91	7,500 kg	6.580/kg	49,350
	1989-90	7,057 kg	(R)6.400/kg	45,165
Variety Cheese (kgs)	1990-91	5,423 kg	8.510/kg	46,150
	1989-90	5,588 kg	7.160/kg	40,010
Ice Cream[1] (litres)	1990-91	26,881 L	2.650/L	71,234
	1989-90	28,576 L	2.110/L	60,295
Fluid Milk Sales**(litres)	1990-91	226,838 L	0.890/L	201,886
	1989-90	243,028 L	0.866/L	210,462
Fluid Cream Sales (litres)	1990-91	10,760 L	1.810/L	19,476
	1989-90	10,334 L	(R)1.700/L	18,084
Buttermilk & Chocolate Milk (litres)	1990-91	18,483 L	0.950/L	17,558
	1989-90	18,125 L	(R)0.925/L	16,766
Miscellaneous Manufactured Cultured Products[2]	1990-91			146,591
	1989-90			130,281
Total	1990-91			595,636
	1989-90			561,708

[1] Includes hard and soft ice cream.
[2] Includes concentrated milk products, cottage cheese, whey cheese, yogourt and yogourt mix (hard and soft).

* April to March.
** Skimmilk has been included in fluid milk.

R Revised figures

TABLE II ALBERTA DAIRY STATISTICS 1960-1990

YEAR	TOTAL MILK	ICE CREAM		BUTTER	
	1,000,000 of units	Production '000	# Plants	Production '000	# Plants
1960	1,650 lb	3,632 gal	18	37,338 lb	86
1965	1,641 lb	5,242 gal	16	36,562 lb	81
1970	1,529 lb	5,634 gal	16	29,311 lb	59
1973	1,396 lb	6,332 gal	15	23,282 lb	46
1974	1,284 lb	6,588 gal	16	18,695 lb	36
1975	1,276 lb	6,671 gal	16	20,587 lb	33
1976	1,273 lb	6,713 gal	14	17,843 lb	25
1977*	1,251 lb	6,835 gal	11	18,342 lb	19
1978	425 hL	31,859 L	10	6,946 kg	19
1979	450 hL	30,343 L	10	7,117 kg	18
1980	480 hL	31,906 L	10	7,863 kg	16
1981	528 hL	27,873 L	8	8,260 kg	13
1982	585 hL	27,797 L	8	8,475 kg	13
1983	564 hL	30,891 L	8	7,800 kg	13
1984	584 hL	31,457 L	9	8,161 kg	11
1985	562 hL	31,287 L	10	6,372 kg	11
1986	579 hL	31,108 L	10	7,409 kg	11
1987	589 hL	29,695 L	11	7,062 kg	11
1988	609 hL	30,064 L	15	7,019 kg	6
1989	664 hL	28,476 L	16	7,147 kg	6
1990	587 hL	26,881 L	14	7,391 kg	6

* Prior to 1977, yearly totals were calculated on a calendar year basis. From 1977 to date, all figures are based on a fiscal year basis (April 1 to March 31).

CHEDDAR CHEESE		VARIETY CHEESE		FLUID MILK SALES**
Production '000	# Plants	Production '000	# Plants	'000
1,760 lb	7	---		382,835 lb
2,188 lb	6	---		384,034 lb
3,357 lb	6	155 lb	3	414,034 lb
4,768 lb	6	913 lb	4	451,516 lb
4,884 lb	6	2,186 lb	6	466,816 lb
6,307 lb	7	2,406 lb	6	468,599 lb
6,872 lb	7	3,161 lb	6	175,219 qt
8,013 lb	6	4,557 lb	6	197,238 L
3,935 kg	6	2,386 kg	8	202,171 L
3,649 kg	6	3,007 kg	11	248,936 L
3,921 kg	6	3,159 kg	11	263,016 L
3,599 kg	6	3,321 kg	11	270,931 L
4,023 kg	6	3,651 kg	10	269,783 L
4,160 kg	6	3,533 kg	10	261,411 L
5,768 kg	6	3,787 kg	10	256,798 L
6,315 kg	6	5,220 kg	10	256,032 L
6,822 kg	6	5,022 kg	10	256,989 L
6,836 kg	7	5,427 kg	9	266,980 L
7,316 kg	7	5,505 kg	11	256,287 L
7,057 kg	7	5,587 kg	11	271,487 L
7,500 kg	6	5,422 kg	11	274,806 L

**Includes Homo, 2%, 1%, Chocolate, Skimmilk and Buttermilk.